STATE OF INDIANA

DEPARTMENT OF LOCAL GOVERNMENT FINANCE



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Porter County Review Findings

Department of Local Government Finance Commissioner Tim Rushenberg April 7, 2009

Executive Summary

The Department of Local Government Finance ("Department") has completed its review of the 2007 pay 2008 assessments and property tax bills in Porter County. This review was initiated by concerns raised by legislators, local officials and taxpayers within Porter County. Each property brought to the attention of the Department was considered during this review.

The Department found that trending was not properly conducted in 2006 pay 2007, because all valid sales were not used in the ratio study. This led to the significant increase in assessed values between 2006 pay 2007 and 2007 pay 2008. For 2007 pay 2008, the Department reviewed the assessed values as they compare to actual sales in Porter County based on internationally recognized statistical assessment standards and found that these standards were met.

The Department verified that the assessed values used to issue tax bills by the auditor and treasurer matched those values determined by the Porter County Assessor. The Department also reviewed budgetary concerns regarding increases in the maximum levy for the City of Valparaiso. The Department determined that any unexpected amount received in levy was due to the addition of levy from a 2007 annexation appeal.

In response to these findings, the Department is ordering Porter County assessing officials to review and assess undervalued or omitted property for 2008 pay 2009. The Department will be performing expedited trending for 2009 pay 2010 to assist the county in getting back on track for on-time billing. The Department reserves the right to perform expedited trending for 2008 pay 2009 if the county fails to adequately address undervalued and omitted properties and resubmit the ratio study by June 1, 2009. Finally, the Department will issue guidance to the local officials regarding the sales validation process, data management and recordkeeping.

History

The Indiana Constitution requires property tax assessments to be uniform, equal and just and based on property wealth. In 1998, the Indiana Supreme Court ruled that the method used to assess property did not meet these criteria and ordered that a different standard be used. In response to that ruling, the state established the standard as "market value-in-use". Property assessed using the market value-in-use system is valued using either the sales, cost or income approach to value. These three approaches are the international standard for appraisal and are used in both fee appraisal and mass appraisal. In markets where there are regular sales, market value-in-use will equal value-in-exchange. The sales comparison approach is the preferred method whenever ample sales can be obtained.

As the Indiana Supreme Court ruled in 1998, the Indiana Constitution "does not require absolute and precise exactitude as to the uniformity and equality of each individual assessment." *State Board of Tax Commissioners v. Town of St. John*, 702 N.E.2d 1034, 1040 (Ind. 1998).

Property in Indiana is assessed on a mass appraisal basis. According to the International Association of Assessing Officers (IAAO) "Mass appraisal is the systematic appraisal of groups of properties as of a given date using standardized procedures and statistical testing. The purpose of mass appraisal is the equitable and efficient appraisal of all property in a jurisdiction for ad

valorem purposes... Mass appraisal stands in contrast to single-property appraisal, which is the valuation of a particular property as of a given date." Gloudemans, Robert J. *Mass Appraisal of Real Property*, International Association of Assessing Officers at 23 (1999).

Regarding mass appraisal, the *Uniform Standards of Professional Appraisal Practice* (2008-2009 Edition) comments, "[p]erfection is impossible to attain and competence does not require perfection." Standards Rule 6-1.

Since the Department reviews data on a mass appraisal basis, this report should not be taken as a judgment on any specific property. Any taxpayer who believes his or her assessment to be inaccurate should appeal that assessment with the county assessor under Indiana Code 6-1.1-15.

Increase in Commercial Assessments

The assessed values of commercial property in Porter County increased significantly from 2006 pay 2007 to 2007 pay 2008. After careful review, the Department has confirmed that the sales used (from 2005 and 2006) support and justify this increase in commercial assessed values.

Increased Land Values

The Department concludes that this increase in assessed values was due to an increased land base rate, which is supported by vacant commercial land sales. The land base rate is the value of a typical plot of land within Porter County, expressed in square footage. The assessor determines the assessed value of land by multiplying the total square footage by the land base rate. For example, if the land base rate is \$100 per square foot, a commercial property resting on 1,000 square feet would have a land assessed value of $$100 \times 1,000 = $100,000$.

Assessors determine the land base rate by examining the sale prices of vacant land during the prior two years. Since the assessments in question were for the 2007 pay 2008 tax year, the Porter County Assessor would have examined vacant commercial property that sold in 2005 and 2006. By examining the sale prices of vacant land, the assessor can calculate the land base rate necessary to assess all commercial property in Porter County at its market value-in-use.

Examination of Sales Used to Set Land Base Rate

To determine whether reliable sales were used, the Department examined the sales data used by the Porter County Assessor to set the land base rate for 2007 pay 2008. This included 51 sales, which were stratified by township. For explanatory purposes, the 16 sales used to determine the land base rate in Center Township are detailed in Table 1, below.

Table 1: Sales Used to Set Land Base Rate in Center Township

PARCEL_#	Sale Date	Sale Price	Total AV	A/S Ratio
640913201014000004	12/27/2006	230,145	224,000	0.97
640913202011000004	9/25/2006	135,000	128,500	0.95
640913276007000004	1/31/2006	160,000	137,719	0.86
640916100015000003*	3/4/2005	40,000	52,200	1.31
640921400012000003	10/12/2005	425,000	336,600	0.79
640923435004000004	12/13/2005	150,000	187,300	1.25
640924384001000004	10/13/2006	757,500	667,600	0.88
640926426001000004	10/19/2006	175,000	144,600	0.83
641019210001000004*	1/4/2005	250,000	239,292	0.96
641019300066000004*	3/9/2006	67,500	43,500	0.64
641019330002000004	3/13/2005	50,000	47,391	0.95
641019400012000004	4/20/2006	620,000	565,800	0.91
641019400015000004*	3/4/2004	807,579	623,000	0.77
641019400038000004*	3/30/2006	1,200,000	1,104,900	0.92
641030200001000003*	2/14/2006	240,000	149,300	0.62
641030204001000004	10/17/2006	750,000	1,090,000	1.45

The most important number in Table 1 is the Assessment-to-Sales Ratio, or A/S Ratio. This number is the assessed value divided by the sales price and represents how close the property's assessment is to its sale price. If this value is 1.0, the assessor has valued the property exactly at the sale price of the parcel. A value less than 1.0 indicates the property is under-assessed, while a value greater than 1.0 indicates it is over-assessed. In this case, the A/S Ratios of 13 of the 16 properties are less than 1.0, indicating that these properties are under-assessed at the land base rate set by the assessor.

To further ensure that reliable sales were used, the Department conducted a statistical analysis—known as a ratio study—of these sales. This analysis examined the following aspects of the assessment:

- Level: Were the sales used assessed at market value-in-use?
- Uniformity: Were sales of similar properties assessed similarly?
- Equity: Were all sales assessed using the same standard?

The Department concludes that the assessment level, uniformity, and equity meet the guidelines set forth in the International Association of Assessing Officers (IAAO) 1999 Standard on Ratio Studies. Specific results of this analysis are included in an Appendix to this document.

The Department's initial review focused on commercial properties in Center Township where taxpayers raised concerns about the increases in assessed valuation. However, additional concerns were raised about commercial assessments in the remaining townships in Porter County. To address these concerns, the Department began a detailed review of every commercial property sale which took place in 2005 and 2006 in Porter County. A separate statistical analysis was conducted for each of the remaining townships for (1) commercial vacant property and (2) commercial improved property. As a result of this analysis, the Department concludes that the

assessment level, uniformity, and equity in these areas also meet the guidelines set forth in the 1999 IAAO Standard. Specific results of this analysis are included in an Appendix to this document.

Verification of Data

The statistical analyses conducted by the Department as part of the review in Porter County relied upon electronic submissions of sales data by the Porter County Assessor. To ensure the validity of this data, the Department obtained paper copies of every sales disclosure for every sale included in each analysis. The electronic sales data used in these analyses was checked by hand against these sales disclosures. Sales which could not be verified independently were not used in the Department's analysis.

Since much of the concerns raised in Porter County were focused in Center Township, all 16 vacant commercial sales in Center Township were checked independently. A representative sample of all commercial sales, including both vacant and improved, in the remaining townships was checked. This sample included 129 out of 211 parcels. Care was taken to ensure that sales from each township were represented adequately.

As a result of this verification process, the Department removed six of the 16 Center Township vacant commercial sales from the analysis due to significant differences between the sales price reported on the electronic submission of the ratio study and that provided on the hard copy of the sales disclosure form or lack of sales disclosure form. (Sales indicated by asterisk in Table 1). In addition, the Department discovered 14 of the 211 sample sales where all identifying information was different on the sales disclosure forms than in the electronic submission of the ratio study. The difference in information makes it likely that the data recorded on the sales disclosure form was of a different sale of the same parcel, which was not meant to be included in the ratio study.

The Department conducted a ratio study analysis on all townships in Porter County, for both vacant and improved commercial property, without excluding the sales mentioned in the previous paragraph to ensure that their presence did not alter the validity of the county's ratio study. In addition, a statistical test confirmed that the removed parcels were not systematically different than those which were included, meaning the land base rate would not be affected by their removal. In all townships, the Department's analysis confirmed that the inclusion of these sales did not affect the assessed values of vacant and improved commercial property in Porter County and thus that the sales used in the ratio study support the assessed values of these properties. Results from these analyses are included in the Appendix of this document.

"Cherry Picking" Sales in Center Township

Sales from 2005 should have been used in both the 2006 pay 2007 ratio study and the 2007 pay 2008 ratio study. During the side-by-side review of the ratio studies for these two years, the Department determined that trending had not been properly applied during 2006 pay 2007, because not all open market, arm's-length sales in 2004 and 2005 were used to trend for 2006 pay 2007. The Department discovered that three sales from 2005 and one sale from 2004 were included in the 2007 pay 2008 ratio study but not in the 2006 pay 2007 ratio study. Since the sales were eligible to be included in both years, this finding suggests that the tactic of "cherry picking," or selecting only certain sales, occurred. The assessor apparently used only sales that

supported the assessments in order to pass the various statistical tests conducted by the Department. To determine the effect the inclusion of these four sales would have had on the 2006 pay 2007 ratio study, a new ratio study was conducted based on their 2006 assessed values. Table 2 displays the sales from both studies (sales marked with an asterisk indicate that these sales were included in the original ratio study completed by Porter County).

PARCEL #	Sale Date	Sale Price	Total AV	A/S Ratio
641019210001000004*	1/4/2005	250,000	179,500	0.72
640924343006000004*	1/22/2004	175,000	133,200	0.76
640924131002000004*	4/27/2004	10,000	9,600	0.96
640921400012000003	10/12/2005	425,000	123,300	0.29
641019400015000004	3/4/2004	740,000	350,100	0.47

12/13/2005

3/4/2005

150,000

40,000

1.25

1.31

187,300

52,200

Table 2: 2006 pay 2007 Center Township Ratio Study

Table 2 displays Center Township vacant commercial assessments prior to adjustments for trending. The median ratio is 0.76, indicating that these properties are under-assessed. The coefficient of dispersion (COD) is 38.35, almost double the IAAO Standard, and the price-related differential (PRD) is 1.42. (See appendix for further explanation of these statistical measures). These statistical findings support the Department's conclusion that these properties were not assessed correctly for 2006 pay 2007. The Department would not have approved Porter County's 2006 pay 2007 ratio study had it been submitted with these values. Correcting these errors caused a large increase in the assessed value of commercial properties in 2007 pay 2008.

Residential Assessments in Shorewood Forest Neighborhood

640923435004000004

640916100015000003

In response to reports that properties located in the Shorewood Forest neighborhood of Porter County were undervalued, the Department expanded its review of the ratio study to ensure these assessments were supported by the sales data.

Validation of Sales

Upon review of the ratio study as it concerned the Shorewood Forest neighborhood, the Department found that there were eight sales marked "valid" in Porter County's required sales data submission that were not utilized in the ratio study. When the Department asked why these sales were excluded, the county indicated that two of the eight were excluded as vacant land sales, one was excluded because the sales analyst suspected that one of the parties to the sale was "known to buy low and sell high," and the remaining five sales were excluded because the parties to the transaction did not respond to the sales confirmation letter issued by the county assessor's office.

The IAAO 1999 Standard on Ratio Studies instructs the sales analyst to take the position that all sales are candidates for the ratio study unless sufficient and compelling information can be documented to show otherwise. If sales are excluded without substantiation, the study may

appear to be subjective. The phrase "sufficient and compelling" does provide some latitude for interpretation, but it is the opinion of the Department that the failure to return a sales questionnaire is not sufficient and compelling evidence to withhold a sale from a ratio study. Thus, these excluded sales should have been used in the 2007 pay 2008 ratio study.

Neighborhood Characteristics

Neighborhood delineations should place properties exhibiting a high degree of similarity in amenities; use; economic trends; and building characteristics such as improvement quality, age and physical characteristics into homogeneous geographic groups for assessment purposes.

The Shorewood Forest neighborhood currently consists of all the parcels in the subdivision, regardless of their characteristics – that is, waterfront homes are considered to be in the same neighborhood as non-waterfront homes. The Department believes this neighborhood should be stratified as waterfront homes typically command a premium price in the marketplace, and as such, should not be assessed with the same adjustment factor as non-waterfront homes. It is the directive of the Department that the assessor's office must stratify, for 2008 pay 2009, the Shorewood neighborhood into at least two distinct neighborhoods based on their characteristics.

If that neighborhood was delineated properly and these excluded sales included in the ratio study, the waterfront homes likely would be assessed more appropriately to market value-in-use.

Validation of Sales

As the IAAO makes clear in its *Standard on Ratio Studies*, without good data, quality assessments are not possible. The usefulness of sales data is related directly to its completeness and accuracy. The completeness and accuracy of sales data is best confirmed through proper use of the sales disclosure form.

During the Department's review of the Porter County ratio study, the Department found that not all of the sales used in the ratio study were verifiable with a hard copy sales disclosure form. **Quality recordkeeping and sales data management is an absolute must**. The sales used in the ratio study and sales file <u>must</u> be verifiable.

Poor recordkeeping and data management in the county assessor's and auditor's offices prolonged the Department's review and made this review more difficult.

Screening of Sales: Market Value-in-Use

In addition to improving recordkeeping and data management, sales used in a ratio study must be screened to ensure they reflect the market value-in-use of the real property transferred. According to the IAAO, sales screening should ensure the following:

- Sales used in ratio studies reflect to the maximum extent possible the conditions contained in the definition of market value-in-use.
- Sales prices reflect only the market value-in-use of the real property transferred and not the value of personal property, financing, leases, or other parcels of real property.

- o Only sales that occurred during the period from which sales are drawn are to be used.
- Sales are excluded from the ratio study only with good cause (for example, when the sales compromise the reliability of the ratio study).

Every arm's length, open market sale that appears to meet the conditions of a market value-in-use transaction must be included in the ratio study *unless*:

- o Data for the sale are incomplete, unverifiable, or suspect; or
- The sale fails to pass one or more specific tests of acceptability in the IAAO Standard on Ratio Studies, Standard 6 (July 1999); or IAAO Standard on Ratio Studies, Appendix A (July 2007).

Verification of Assessed Values Used for Tax Billing

An additional concern was that the assessed values used to issue tax bills by the auditor and treasurer did not match the assessed values set by the Porter County Assessor. The Porter County Assessor received anecdotal reports that this was the case, but did not have the resources to perform the systematic analysis necessary to ensure the integrity of the data.

In order to assist the Porter County Assessor and ensure that no systematic discrepancies existed, the Department obtained electronic copies of two files. The first file was provided by the assessor, and was the same file the assessor sent to the Porter County Auditor after the Porter County ratio study was approved by the Department. This file contained the certified 2007 pay 2008 assessed values as determined by the Porter County Assessor and approved by the Department.

The second file was obtained from the Porter County Auditor. This file contained all the information the printer needed to print the tax bills, including the certified 2007 pay 2008 assessed value for each property. This file is the final data source generated by the auditor before tax bills are sent to each taxpayer. As such, comparing the assessed values in the file sent by the assessor to the auditor to those values in the file sent by the auditor to the printer would reveal any discrepancies between the values.

The Department compared these two files using a computer matching program. In all, 6,815 discrepancies were discovered out of 89,142 records. This was a significant amount; however, further investigation revealed that all but two of these discrepancies resulted from duplicate records in the file the assessor sent to the auditor. In each of these 6,813 cases, the assessor had sent two assessed values to the auditor: one representing the current year (2007) certified assessed values and one representing the previous year (2006) assessed values. Due to this double rolling, it became imperative to ensure that the auditor had in fact billed on the correct 2007 assessed values and not the 2006 outdated values. Across numerous taxing districts, the Department verified via the Porter County tax bill online database that the correct 2007 assessed value was used to calculate the tax bill. The Department concluded that there is no systemic problem whereby the auditor billed on incorrect values.

In the few instances where incorrect assessed values were used for tax billing, the county auditor and treasurer have reissued those tax bills with the correct assessed values.

Valparaiso Budget and Levy Approval

On March 14, 2009, the Department was notified that the City of Valparaiso unexpectedly received levy approval for approximately \$518,000 for budget year 2008. The Department researched this issue thoroughly and determined that any unexpected amount received in levy was due to the addition of a levy from an appeal due to an annexation that became effective January 1, 2007.

Maximum Levy Explanation

The levy appeal due to this annexation, as filed in September 2006, is considered a permanent appeal. The relief granted is not temporary in nature, as would be the case with a property tax collection shortfall or mathematical error appeal. As such, any approved amount becomes and remains part of the unit's maximum permissible ad valorem property tax levy. This addition only happens in the budget year for which the appeal was approved. In future years, the appeal amount is not added again, but the amount of growth is greater because the unit would be starting with a higher base levy amount.

Maximum Levy Calculation

In 2007, Valparaiso had a maximum permissible ad valorem property tax levy of \$11,833,856 before any adjustments. This represents the previous year's maximum levy, less one-half of the difference between the maximum levy and the total actual levy for unit-controlled funds, and less any temporary adjustments to the maximum levy (like shortfall appeals, or cumulative fund adjustments made outside the maximum levy). For budget year 2007, the annexation appeal of \$1,860,667 was granted, so this was added permanently to the maximum levy for 2007. Thus the equation for 2007 maximum levy works as follows:

Normal Maximum Levy: \$11,833,856

Minus Levy Excess: \$0
Plus Financial Institutions Tax (FIT): \$31,101

Plus Miscellaneous Changes

Annexation Levy Appeal: \$1,860,667 Cum. Fund outside Max Levy: \$359,526 Equals Working Maximum Levy: \$14,085,150

This \$14,085,150 figure now becomes the base for calculating the 2008 maximum levy and beyond. As in 2007, the Department would deduct one-half of the unused maximum levy and temporary adjustments to the maximum levy (the Cum. Fund outside Max Levy and FIT adjustments) to calculate the following for pay 2008:

Maximum Levy for 2007: \$14,085,150 Less ½ of unused maximum levy: \$675 Less temporary adjustments: \$390,627 Equals Maximum Levy before Growth Factor: \$13,693,848 Multiplied by Growth Factor of 1.037: \$14,200,520

During the budget process for pay 2008, there is a calculation step in IC 6-1.1-18.5-3 that covers annexations and is intended to provide additional levy growth to account for the increased territory and provision of services for the civil unit. It reads:

"STEP THREE: Determine the lesser of one and fifteen hundredths (1.15) or the quotient (rounded to the nearest ten-thousandth (0.0001)), of the assessed value of all taxable property subject to the civil taxing unit's ad valorem property tax levy for the ensuing calendar year, divided by the assessed value of all taxable property that is subject to the civil taxing unit's ad valorem property tax levy for the ensuing calendar year and that is contained within the geographic area that was subject to the civil taxing unit's ad valorem property tax levy in the preceding calendar year."

This calculation step applies a growth factor to cover annexations. As a result of this calculation step, the maximum levy for Valparaiso was increased by an additional 4.94 percent, as follows:

2007 pay 2008 Net Assessed Value for Valparaiso: \$1,831,126,129

Less Annexation Area Net Assessed Value

as reported by Porter County Auditor: \$86,163,380

Equals 2007 pay 2008 Net Assessed Value

for pre-annexation area: \$1,744,962,749

Annexation Factor = \$1.831.126.129 / \$1.744.962.749 = 1.0494 = 4.94%

The application of this additional annexation growth factor took the working maximum levy from \$14,200,520 to \$14,902,027. Since annexation growth factors are not considered temporary adjustments, this amount also is included in the basis for future maximum levy calculations.

The final working maximum levy for pay 2008 was derived as follows:

Normal Maximum Levy: \$14,902,027

Minus Levy Excess: \$0
Plus Financial Institutions Tax (FIT): \$29,286

Plus Miscellaneous Changes

Shortfall Appeal: \$218,488 Cum. Fund outside Max Levy: \$360,732 Equals Working Maximum Levy: \$15,510,533

For pay 2009, although maximum levies have not yet been officially calculated for Porter County, the Department expects the levies to be as follows:

Maximum Levy for 2008: \$15,510,533

Less ½ of unused maximum levy: \$448
Less temporary adjustments: \$608,506
Equals Maximum Levy before Growth Factor: \$14,901,579
Multiplied by Growth Factor of 1.04: \$15,497,642

This \$15,497,642 figure will be the starting point for pay 2009, and there will be no increase for either annexation levy appeal or annexation factor applied as these already have been included.

Moving Forward

Taxpayer Action

Taxpayers have the right to appeal 2007 pay 2008 assessments that they believe are incorrect. Indiana Code 6-1.1-15 details the appeals process, and the Department encourages any taxpayer who feels their assessment is in error to file an appeal. If the taxpayer and assessing official do not agree on the resolution of the assessment issues, and the taxpayer is not satisfied with the subsequent decision of the property tax assessment board of appeals, the taxpayer has the right to appeal to the Indiana Board of Tax Review (IBTR). The Department is happy to provide taxpayers with detailed information regarding the taxpayer's rights and the appeals process.

Department Actions

Sales Validation Guidance

Due to the apparent "cherry picking" of commercial sales in Center Township for 2006 pay 2007 and the exclusion of valid sales in the Shorewood Forest residential neighborhood for 2007 pay 2008, the Department will issue guidance regarding the sales validation process to the county assessor to ensure that appropriate sales are being used for ratio studies and trending. Details of this guidance are included in the "Validation of Sales" section of this report.

It is clear to the Department that the data management and recordkeeping in the Porter County Assessor's and Auditor's offices are substandard. House Enrolled Act (HEA) 1001 gives the Department the authority to audit the offices of county assessors to ensure the laws and rules pertaining to sales verification and other assessment functions are followed. The Department will be pursuing more frequent reviews of county offices.

Undervalued or Omitted Property for 2008 pay 2009

The Department will order Porter County assessing officials to review and assess undervalued or omitted property in areas like Shorewood for 2008 pay 2009. In accordance with Indiana Code 6-1.1-9-1, if a township assessor (if any), county assessor, or county property tax assessment board of appeals believes that any taxable tangible property has been omitted or undervalued on the assessment rolls or the tax duplicate for any year or years, the official or board shall give written notice under IC 6-1.1-3-20 or IC 6-1.1-4-22 of the assessment or increase in assessment. The notice shall contain a general description of the property and a statement describing the taxpayer's right to an appeal with the county property tax assessment board of appeals under IC 6-1.1-15-1.

The Department already has received a 2008 pay 2009 ratio study from Porter County. The Department will order the county to withdraw this ratio study and resubmit by June 1, 2009, after the local assessing officials have assessed all under-valued or omitted properties and made adjustments necessary to maintain fair and equitable taxation. IC 6-1.1-9; IC 6-1.1-13-5.

This resubmitted ratio study will be carefully reviewed by the Department to ensure that everything is conducted in accordance with the IAAO *Standard on Ratio Studies*. If the Department finds any questionable data or factors in the county's ratio study, the Department reserves the right to also determine the trending factors and assessments for 2008 pay 2009 through the expedited trending process as will be conducted for 2009 pay 2010 (see below).

Expedited Trending for 2009 pay 2010

The Department will be performing expedited trending, in accordance with 50 IAC 21-12-1, for Porter County for 2009 pay 2010 to assist the county in getting back on track for on-time billing.

In the event a county fails to conduct trending by the deadlines set forth in the administrative rule, the Department is required to conduct the trending for that county. In doing so, the Department is required to use data in its possession obtained from:

- (1) the county assessor; or
- (2) any of the sources listed in the administrative rule, including but not limited to sales data, government studies, MLS data, cost and depreciation tables.

Using the data above, the Department shall propose to apply annual adjustment factors in any county or within a county, in any one (1) or more of the classes of property. The Department is required to issue notice and provide opportunity for hearing in accordance with IC 6-1.1-14-4 and IC 6-1.1-14-9, as applicable, before issuing final annual adjustment factors.

This authority will be exercised in order to get Porter County back on track. This action already has been discussed with the Porter County Assessor, and the Department does not anticipate any problems executing this provision for 2009 pay 2010. Once again, the Department reserves the right to perform expedited trending for 2008 pay 2009 if the county's ratio study contains any suspect information or if the ratio study is not submitted to the Department on or before June 1, 2009.

If you have any questions regarding this review, please contact me at 317-233-6770 or trushenberg@dlgf.in.gov.

Attachment: Appendix

Appendix Statistical Analyses of Commercial Property in Porter County

This Appendix presents the results of four statistical analyses conducted by the Department on commercial sales in Porter County. These analyses were of the following data:

- 1. Commercial Improved Sales (no sales excluded)
- 2. Commercial Improved Sales (14 sales excluded)
- 3. Commercial Vacant Sales (no sales excluded)
- 4. Commercial Vacant Sales (6 sales excluded)

Results for each township are presented in each of four tables below. The second column, **SALES**, indicates the number of sales which were analyzed for that township. The remaining three columns report the results of three statistical tests conducted by the Department.

The **MEDIAN RATIO** measures how close properties in the township are assessed at their market value-in-use. The IAAO Standard requires this to be between 0.90 and 1.10. A median ratio less than 1.0 indicates that the average property in the township is under-assessed.

The COEFFICIENT OF DISPERSION (COD) measures how similar property assessments are within the township. The smaller the COD, the more similar the assessments are, and the more confidence one can have that the median ratio describes the average level of assessment. The IAAO Standard requires that the COD for commercial property be less than 20. For all townships, the COD's listed here indicate that the median ratio is a reliable indicator of the average level of assessment.

The PRICE-RELATED DIFFERENTIAL (PRD) measures whether high-value properties and low-value properties are assessed using the same standard. The IAAO Standard requires this to be between 0.98 and 1.03. For all townships, the PRD's listed here indicate that the two strata of properties were assessed using the same standard.

Table 3: Ratio Study Results for Porter County Improved Commercial Sales, by Township (no sales excluded)

Township	Sales	Median	COD	PRD
Boone	13	.95	14.6	.96
Center	53	.95	16.9	1.01
Pine	6	.91	10.4	0.99
Portage	40	.98	15.6	1.02
Westchester	33	.98	14.9	.99
Remaining Twps.	13	.97	14.8	.99

Table 4: Ratio Study Results for Porter County Improved Commercial Sales, by Township (14 sales excluded)¹

Township	Sales	Median	COD	PRD
Boone	12	.95	14.8	.96
Center	47	.95	16.9	1.01
Pine	5	.95	6.9	1.00
Portage	36	.98	15.8	1.02
Westchester	33	.98	14.9	.99
Remaining Twps.	11	.97	14.6	.99

Table 5: Ratio Study Results for Porter County Vacant Commercial Sales, by Township (no sales excluded)

Township	Sales	Median	COD	PRD
Center	16	.91	16.6	.99
Portage	11	.93	8.9	1.00
Washington	8	.92	3.8	1.01
Westchester	7	1.01	9.5	1.01
Remaining Twps	9	.92	14.2	1.02

Table 6: Ratio Study Results for Porter County Vacant Commercial Sales, by Township (6 sales excluded)²

Township	Sales	Median	COD	PRD
Center	10	.91	15.8	.99
Portage	11	.93	8.9	1.00
Washington	8	.92	3.8	1.01
Westchester	7	1.01	9.5	1.01
Remaining Twps	9	.92	14.2	1.02

¹ Sales were excluded because all identifying information was different on the sales disclosure form than in the electronic submission of the ratio study. See page 5.

² Sales were excluded because significant differences existed between the sales price reported on the electronic submission of the ratio study and that provided on the hard copy of the sales disclosure form or lack of sales disclosure form. See page 5.